PATENT ABSTRACTS OF JAPAN

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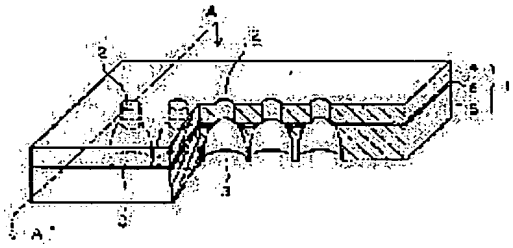
(54) INK JET NOZZLE PLATE AND ITS PRODUCTION

(57)Abstract:
PROBLEM TO BE SOLVED: To produce orifices and taper parts high in shape accuracy and to inexpensively provide an ink jet recording apparatus excellent in printing quality.
SOLUTION: Orifices 2 are formed to the active layer 4 of an SOI substrate 1 by plasma etching and taper parts 3 are formed to the part corresponding to the support 5 of the SOI substrate 1 to form an ink jet nozzle plate. The taper parts 3 are formed by alkali anisotropic etching or by alkali anisotropic etching and plasma etching succeeding thereto. The SOI substrate having the active layer 4 formed thereto by a CVD method is used to form the ink jet nozzle plate.



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Japanese Laid-Open Publication

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A. Relevance of the Above-identified Document

The following is a partial English translation of exemplary portions of non-English language information that may be relevant to the issue of patentability of the claims of the present application.

B. Translation of the Relevant Passages of the Document

See the attached English Abstract.

[MEANS TO SOLVE PROBLEM]

[0010]

... in the plasma etching, an SiO_2 layer in the SOI substrate functions as an etching stop layer. ...

[Embodiments]

[0013]

... As shown in Fig. 1, an inkjet nozzle plate of the embodiment is arranged in such a manner that, orifices 2 are formed in an active layer 4 of an SOI substrate 1, tapered sections 3 are formed in a supporter 5, and in the SOI substrate 1, the active layer 4 and the supporter 5 are electrically insulated from each other by a dielectric layer. The active layer 4 and the supporter 5 are both

made of silicon single crystal. ...